WO 2005/005126 PCT/EP2004/007687

Claims

- 1. Handling system for an injection molding machine (100) wherein an application, for example a label, is inserted in the mold cavity (105) of an injection molding tool (104) before injection molding, when for example a beaker having the label (1) on the outer circumference is fabricated by injection molding, wherein a preform means (8) for the label (1) is provided outside the injection molding tool, has a feeder means (3, 4) for the label and a preform (5) into which the label is introduced by the feeder means, and is thus preformed to the shape in which it is to be inserted in the injection mold (105), and a transfer means (302) removes the preformed label from the preform (5) and delivers it to the injection mold (105), wherein the preform (5) is decouplable from the feeder means (3, 4) and moveable into a position different from it.
- 2. Handling system according to claim 1, wherein a transfer carriage (203) is provided with at least one transfer arm (202) on which the preform (5) is mounted, and the transfer carriage (203) is moveable into a delivery station (300) in which a core (303) of a stack gripper (302) engages into the preform (5) for transferring the preformed label, whereupon the stack gripper (302) is moveable into the opened injection molding tool to transfer the preformed label to the injection mold (105).
- 3. Handling system according to claim 2, wherein on the stack gripper (302) a core (303) is provided which engages in the preform (5) and takes up the preformed label.
- 4. Handling system according to claim 3, wherein by means of removal grippers (306) mounted on the stack gripper (302) finished injection-molded parts can be removed from the injection molding tool.
- 5. Handling system according to claims 2 to 4, wherein an injection molding tool is provided with two separating planes, the transfer carriage (203) has at least two

WO 2005/005126 PCT/EP2004/007687

transfer arms (202) moveable relative to one another, and the stack gripper (302) in turn has at least two inserter arms (301) moveable relative to one another.

- 6. Handling system according to the preceding claims, wherein the preform (5) is mounted decouplably and couplably on the transfer arm (202) or a corresponding element of a transfer means.
- 7. Handling system according to the preceding claims, wherein the core (303) is mounted decouplably and couplably on the stack gripper (302) or another element (400) of the handling system.
- 8. Method for inserting an application, for example a label (1), in the injection mold (105) of an injection molding machine (100) for example for fabricating a beaker provided with a label,
 wherein the label (1) is preformed in a preform means (8) into the form in which it is to be inserted in the injection mold (105),
 whereupon the preform (5) with the preformed label is decoupled from the preform means (8) and transferred to a delivery station (300), in which the preformed label is removed from the preform (5) and subsequently transferred to the injection molding tool, whereupon the preformed label is inserted in the injection mold (105).
- 9. Preform means for an application to be applied to an injection-molded article, for example a label (1), wherein a supporting means (700; 800) is insertable into a preform (5) and supports the label (1) on the inner circumference of the preform (5) until a holding means provided on the preform, for example a suction means, takes over the holding of the label in the preform (5).